

ABSTRACT OF THE DISCLOSURE

A device includes a carrier element with a surface prepared for direct or indirect coupling or receiving of cells, at least one optical detector to receive a luminescence signal, the detector being integrated into the carrier element below the prepared surface, a cover covering the prepared surface to form a cavity, the cover having an inlet opening and an outlet opening, and an excitation source connected to the inlet opening. The excitation source constitutes a reservoir for a chemical or biological excitation substance or medium that influences the metabolism of the cell, with metabolic processes being made visible by luminescence and detected by at the least one optical detector.